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10/554,309	08/28/2006	Hans Gygax	30887/04002	2653

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EXAMINER

O'HARA, BRIAN M

ART UNIT	PAPER NUMBER
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3644

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/554,309	Applicant(s) GYGAX, HANS	
	Examiner Brian M. O'Hara	Art Unit 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 3, 4, 6, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Firner (US Patent 2,132,529 A).**

3. Regarding **Claim 1**, Firner discloses a light aeroplane of the ultra light class and sport plane category, the aeroplane comprising:

an engine (within "D"; See Fig. 1; also 12 is an engine mount), proximate a nose of the aeroplane, with tractor propellers (in front of D; See Fig. 1);

a cabin cell (B), arranged behind the engine, wide enough for two adjacent passenger seats ("operator and passengers"; See first column of Page 2, Lines 53-55);

a central tube (17), having at least a 200 mm diameter, extending along a longitudinal axis of the aeroplane;

a square profiled tube (10) engaged with and beneath the central tube;

shock strut tubes (See struts indicated as extending from 58 in Fig. 1), for supporting main wheels (58) of the aeroplane, housed in the square profiled tube;

an upward rising tube bend (11), behind and fixed with back side ends of the shock strut tubes (11 extends down to meet 10 near where the arrow for 10 points in Fig. 1), bordered from the front side by a plastic U-shaped profile (See Shape of 43 in

Fig. 2) in a cross section and defining a back door frame and a local external outline of the cabin above the square profile; and

a space (B), limited on a lower side by a virtual flat cabin floor, that extends transversely beyond the square profile (B extends out to the left and right further than 10).

4. Firner further discloses that the size of the aircraft could be changed "depending upon the capacity of the craft". Figure 2 of Firner suggests that a person lying in a stretcher could be placed within the structure shown, where one end of the stretcher is adjacent element 24 at the front of the aircraft and the other end of the stretcher extends rearwardly from element 24, possibly into the volume defined by element 44. Additionally, Figure 2 suggests that a person lying on a stretcher could be placed within the volume defined by element 43 as shown in the right side of Fig. 2. One of ordinary skill could recognize these spaces could house a person on a stretcher as suggested by Figure 2 of Firner; See MPEP 2125. Firner does not disclose the specific sizes of the tubes, cabin space, or MTOW. At the time of invention, it would have been obvious to one of ordinary skill in the art to provided the central tube having at least a 200 mm diameter and the free remaining space above the virtual flat cabin floor presents an orthorhombic space of at least 190 cm in length, at least 45 cm wide, and at least 40 cm in height for receiving a person lying on a stretcher for air-transporting of said person, and a maximum take-off weight (MTOW) between 452.5 kg and 590 kg since one having skill in the art would be able to size the aircraft to meet specific flight requirements/ restrictions.

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5. Additionally, it is well known in the art that a small aircraft can serve to accommodate a person laying on a stretcher, See for instance US Patents 5490703 A, 5785277 A, 5779296 A, 6585188 B2, 4783025 A, and 4637575 A. It is obvious to one of ordinary skill in the art to size an aircraft cabin to accommodate a person on a stretcher.

6. Regarding **Claims 3 and 4**, Firner discloses the tube bend is obliquely backward inclined (see bottom of 11 in Fig. 1 is angled differently) and extends along the inner cell wall (11 defines the rear bulkhead of the cabin), and the lower side of the end zones of the square profile (10) is braced (via 57) to the struts.

7. Regarding **Claim 6**, Firner discloses two frontward pointed supporting rails (26 and 27), parallel to each other, extend from the front side of the square profile in flight direction (longitudinally), the rails being braced by oblique struts (24 and 25) extending downward to the front side of the square profile element and on said supporting rail a seat (31) is guided into several positions by a carriage.

8. Regarding **Claim 10**, Firner discloses the aeroplane is a single-seater (can be one seat or multiple) for a gliding trailer.

9. **Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Firner as applied to Claim 1 above and over applicant's admitted prior art on Pages 1-3 of the specification, and further in view of www.comco-ikarus.de/ (2003).**

10. Along with the web page dated 2003, an English translation with figure numbers added for purposes of discussion was provided on 04/02/2009. The English translation is referred to throughout the remainder of the rejection below.

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11. Applicant's admitted prior art states that "the ultralight or ecolight aeroplane presented here is designed using a conventional construction" (Page 1, Lines 14-16) and "Ultralight or ecolight aeroplanes with this basic construction are already known" (Page 1, Line 20). These above two statements including a review of the www.comco-ikarus.de/ reference reveals that the IKARUS C42 has the same design including the same elements as listed in claims 3-10 as the current invention.

12. More specifically, applicants admitted prior art describes the IKARUS C42 with a central tube (Page 2, Line 2), a tube-grate frame (Page 2, Lines 5-6), synthetic panels which determine the aesthetic appearance of the aeroplane (page 2, Lines 11-16), and wing bracings (Page 2, Line 8).

13. www.comco-ikarus.de/ teaches an ultra light airplane with gable shaped arranged shock strut tubes (See Fig. 3), a U-shaped profile (Fig. 3 shows round fuselage immediately behind the wing), a square shaped profile (Portion under wing, See Fig. 3), doors that are fixed above (See Fig. 5), carbon fiber fairings (Page 2), a 100 liter fuel tank (Page 1 50+50 liter tank), welded tube construction with thread sleeves (Page 2, fittings and screws made of stainless steel or high strength standard elements), and towing of a glider (See Fig. 4).

14. In view of applicant's disclosure concerning the construction of the aircraft, and the technical specifications available on www.comco-ikarus.de/, it would have been obvious to one of ordinary skill in the art to provide the large cabin ultralight aircraft of Firner as described above, with the design elements of the IKARUS C42 as taught by

www.comco-ikarus.de/. The motivation for doing so would have been to provide a larger cabin aircraft that is also light in weight to conserve fuel.

Response to Arguments

15. Applicant's arguments filed 02/10/2011 have been fully considered but they are not persuasive.

16. Applicant argues on Page 8 Lines 11-16 and Page 9 Lines 20-23 of the Remarks that IKARUS C42 is essentially too short for transporting a person in lying condition therein. This argument is not seen to be commensurate with the scope of the rejection. The IKARUS C42 reference is used to teach lightweight materials and other limitations in Claims 3-10.

17. Applicant argues on Page 8 Line 17 through Page 9 Line 9 that Firner does not disclose an aircraft with an MTOW of between 452.5 kg and 590 kg. This argument is not seen to be commensurate with the scope of the rejection. As described above, the Firner reference discloses the structural limitations of Claim 1 except for the MTOW limitations. New materials including composites, lightweight metals, and plastics have been developed for use in aircraft since the publication of the Firner patent. One of ordinary skill in the art would have the ability to apply these new lightweight materials to produce an aircraft with substantially reduced weight in order to make the aircraft more efficient in flight. Additionally, in view of the new US Sport's Plane Category regulations one of ordinary skill in the art would have motivation to provide an aircraft in the MTOW range of 452.5 kg and 590 kg.

18. On Page 9, Lines 10-19 applicant argues that none of the references pointed to in paragraph 16 of the previous office action dated 11/10/2010 disclose all of the limitations of Claim 1. This argument is not seen to be commensurate with the scope of the rejections. These references were shown in order to convey that it is well known in the art to accommodate a person lying on a stretcher in a lightweight aircraft.

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. O'Hara whose telephone number is (571)270-5224. The examiner can normally be reached on Monday thru Friday 10am - 5pm except the first Friday of every Bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy D. Collins can be reached on (571)272-6886. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOSHUA J MICHENER/
Primary Examiner, Art Unit 3644

/B. M. O./
Examiner, Art Unit 3644